



Summary of Results

External Quality Assessment of Food Microbiology *Staphylococcus aureus* Enterotoxin Scheme

Distribution Number: STA040

Sample Numbers: ST0079, ST0080

Distribution Date:	January 2019
Results Due:	08 February 2019
Report Date:	12 February 2019
Samples prepared and quality control tested by:	Angela Appea Richard Borrill Thomas Harper Margaret Njenga Zak Prior Lili Tsengaye Vanessa Wainwright
Data analysed by:	Nita Patel Manchari Rajkumar
Report compiled by:	Nita Patel Manchari Rajkumar
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For general information about the scheme please refer to:

Scheme Guide:

<https://www.gov.uk/government/publications/food-and-water-proficiency-testing-schemes-scheme-guide>

For more specific information about results assessments, scoring systems, statistics, and guidance on analysing your results for the proficiency testing samples please refer to:

Guide to Scoring Systems and Statistics:

<https://www.gov.uk/government/publications/food-and-water-proficiency-testing-schemes-scoring-systems-and-statistics>

This Scheme provides external quality assessment (EQA) samples for laboratories that examine for *Staphylococcus aureus* enterotoxin in food samples. Staphylococcal food poisoning is an intoxication due to consumption of food or beverages containing pre-formed enterotoxins (SE). *S.aureus* is known to produce at least 14 different enterotoxins (Leloir, Y., Baron, F. and Gautier, M. (2003) *Staphylococcus aureus* and food poisoning. *Genet. Mol Res.* 63 - 76)

Strains included in these samples are tested using a modification of a PCR-based technique. (McLauchlin, J., Narayanan G.L., Mithan V. and O'Neill, G. (2000) The detection of enterotoxins and toxic shock syndrome genes in *Staphylococcus aureus* by polymerase chain reaction. *J. Food Protect.* 63, 479 - 488). Copies of this publication are available to participants on request. Quality control testing and determination of the assigned value (expected results) is undertaken using passive latex agglutination (RPLA).

Refer to section 17.0 of the Scheme Guide, if you have experienced difficulties with any of the examinations.

<https://www.gov.uk/government/publications/food-and-water-proficiency-testing-schemes-scheme-guide>

All participants are reminded that reporting incorrect results for detection of *S.aureus* enterotoxin isolated from food samples could have serious public health implications.

Scores are not allocated for results reported for the *S.aureus* enterotoxin Scheme. Comments relating to performance are included in Table 1.

Please contact FEPTU staff for advice and information:

Repeat samples	Carmen Gomes or Kermin Pruvall	Tel: +44 (0)20 8327 7119
Data Analysis	Manchari Rajkumar or Nita Patel	Fax: +44 (0)20 8200 8264
Microbiological advice	Nita Patel or Zak Prior	Email: foodeqa@phe.gov.uk
General comments and complaints	Nita Patel or Zak Prior	FEPTU's website
Scheme consultants	Melody Greenwood or Julie E. Russell	
Scheme Co-ordinator	Nita Patel	

Accreditation: PHE *Staphylococcus aureus* enterotoxin EQA Scheme is accredited by the United Kingdom Accreditation Service (UKAS) to ISO/IEC 17043:2010.



0006

Sample: ST0079**Contents:***Staphylococcus aureus* 10⁶ (wild strain)

The level is presented as colony forming units (cfu) per ml reconstituted sample

Expected Results:

Examination	Expected Result	Your Result	Your Method Reported	Comments
<i>S.aureus</i> enterotoxin	Detected (Toxin group D)			

Total participants reporting for <i>S.aureus</i> enterotoxin	33
Participants reporting correctly	33
Participants correctly reporting detected for SET Group D	7
Participants correctly reporting detected for <i>S.aureus</i> enterotoxin (Toxin group not specified)	5
Participants reporting 'Not Detected' for Toxin Group D	0
Participants correctly reporting detected for SET group A, B, C, D, E	1
Participants correctly reporting detected for <i>S. aureus</i> and 'not applicable' for toxin group	3
Participants correctly reporting detected for <i>S. aureus</i> and 'not examined' for toxin group	18
Total sent sample	36
Non-returns	0
Not examined	3

Sample: ST0080**Contents:***Staphylococcus aureus* 10⁵ (wild strain)

The level is presented as colony forming units (cfu) per ml reconstituted sample

Expected Results:

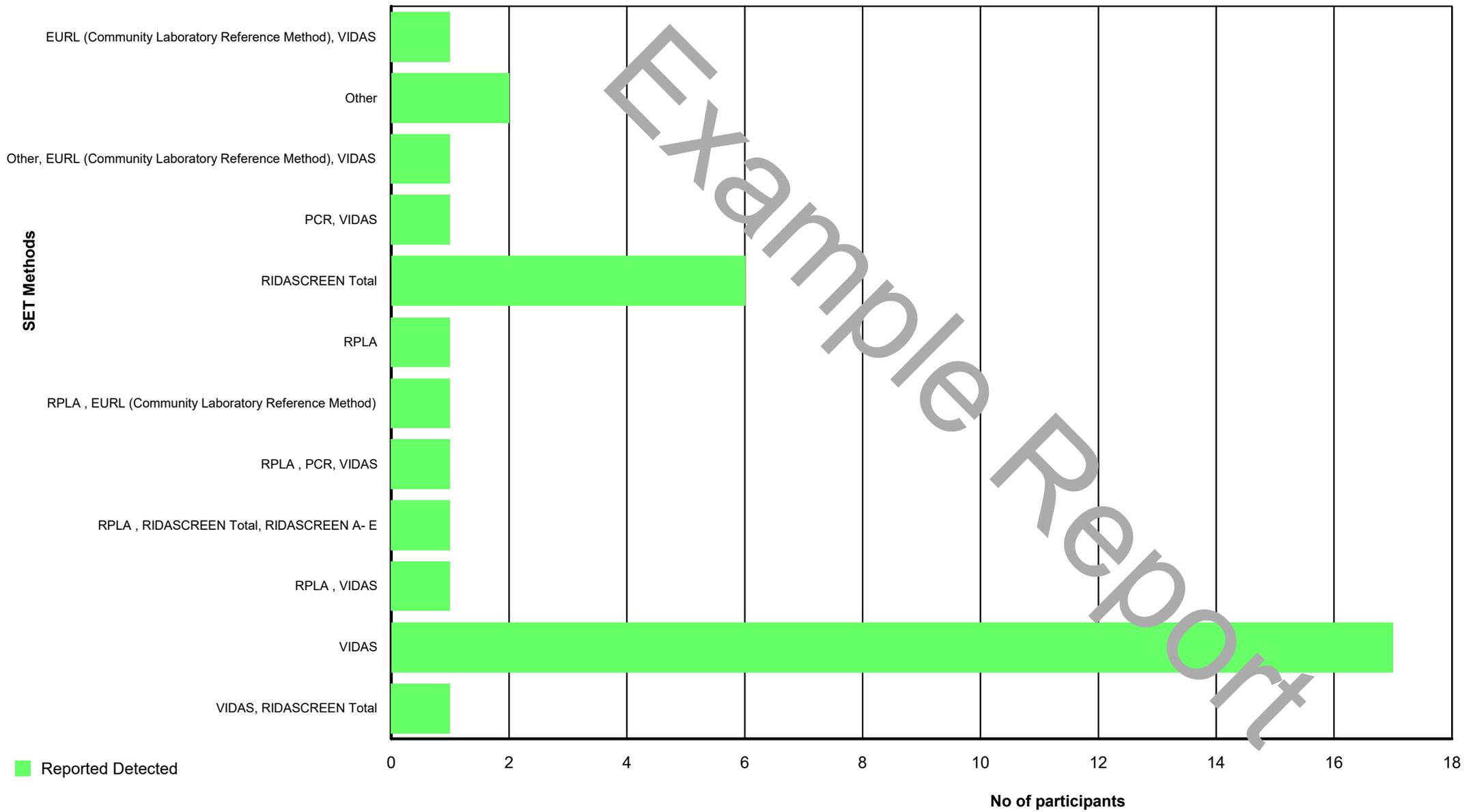
Examination	Expected Result	Your Result	Your Method Reported	Comments
<i>S.aureus</i> enterotoxin	Detected (Toxin group E)			

Total participants reporting for <i>S.aureus</i> enterotoxin	33
Participants reporting correctly	32

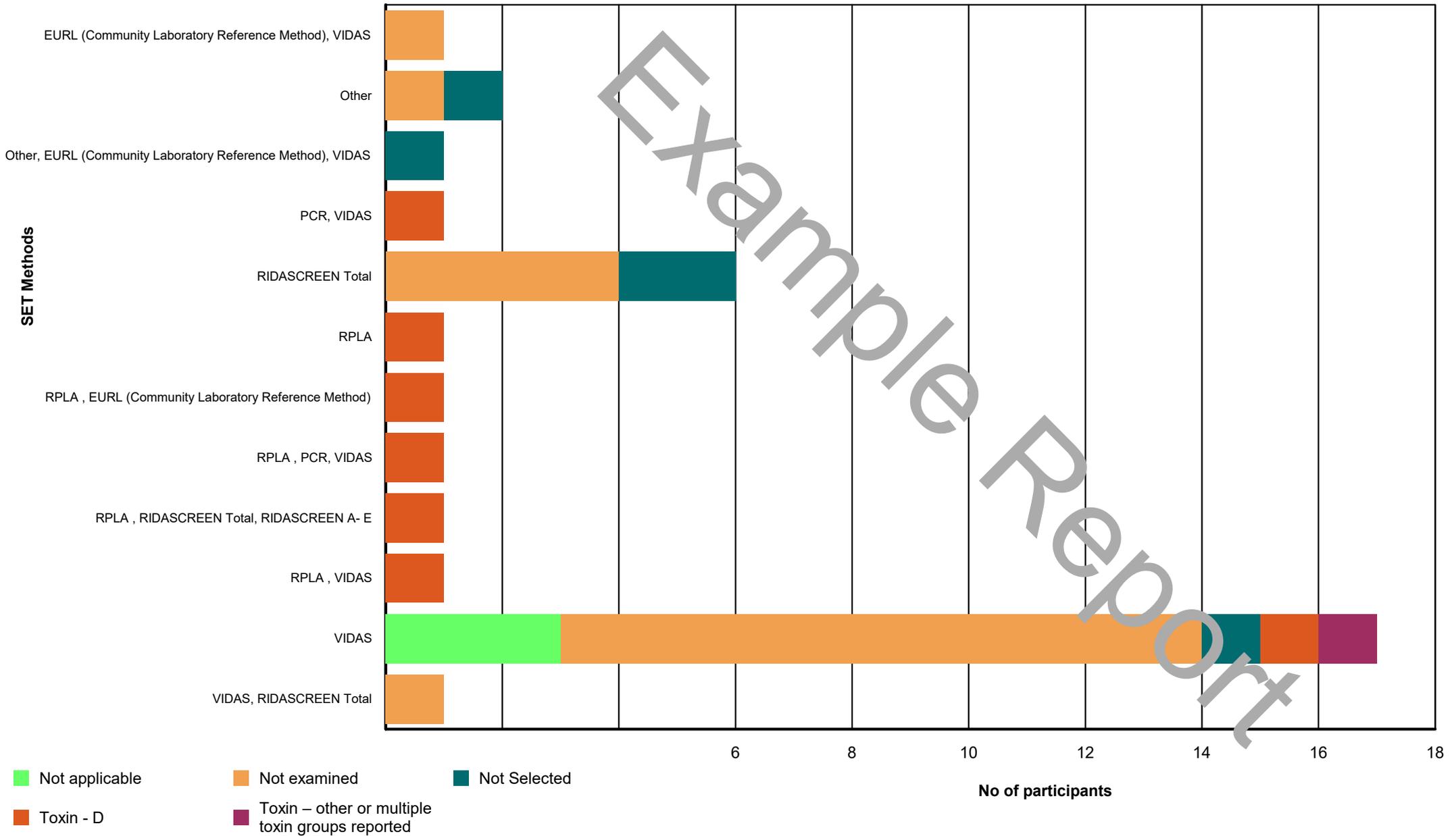
Participants correctly reporting detected for SET Group E	2
Participants correctly reporting detected for <i>S.aureus</i> enterotoxin (Toxin group not specified)	6
Participants reporting 'Not Detected' for Toxin Group E	0
Participants correctly reporting detected for SET Group A	3
Participants correctly reporting detected for SET Group B, C, D, E	1
Participants correctly reporting detected for <i>S. aureus</i> and 'not applicable' for toxin group	3
Participants correctly reporting detected for <i>S. aureus</i> and 'not examined' for toxin group	18

Total sent sample	36
Non-returns	0
Not examined	3

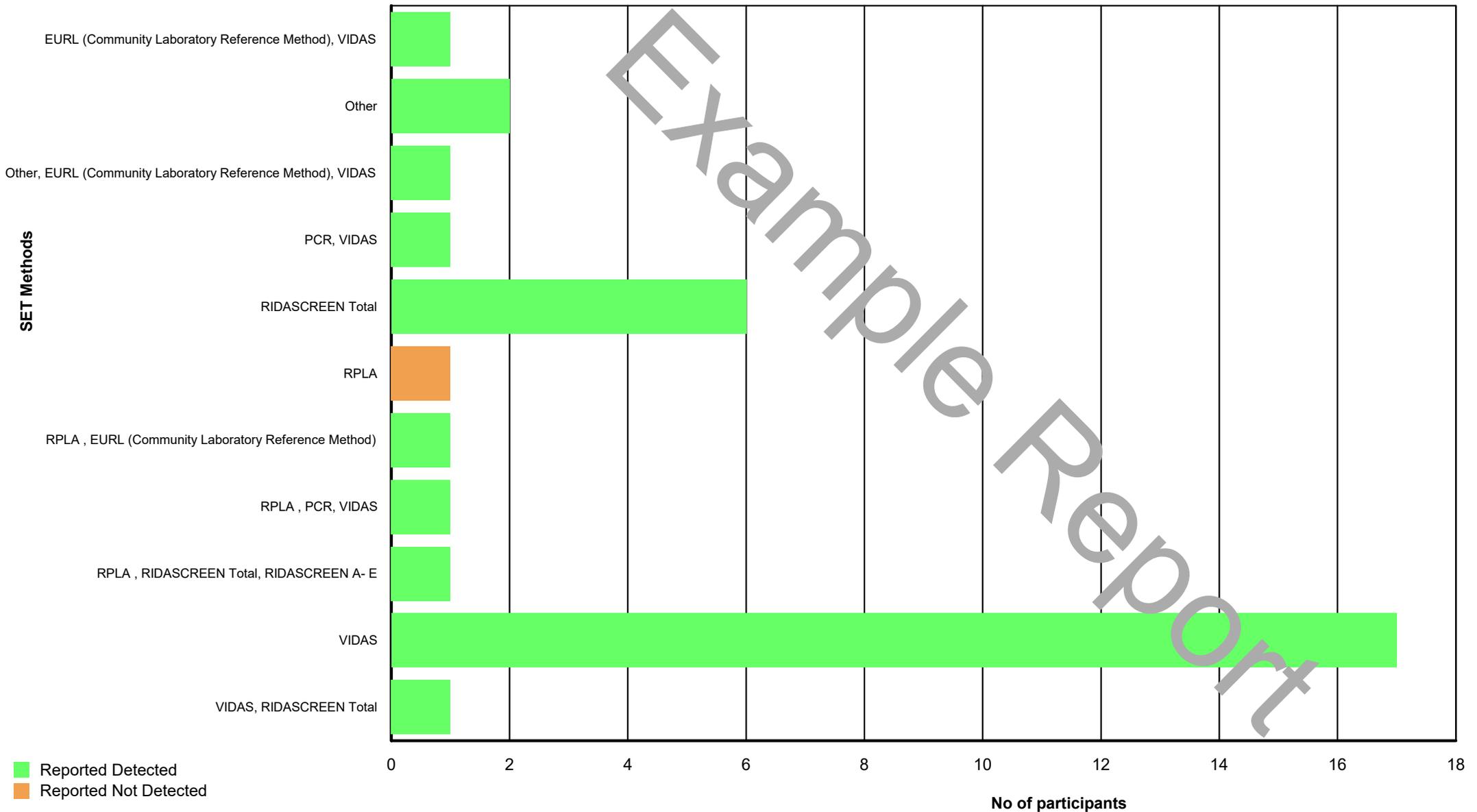
Sample ST0079 : *Staphylococcus aureus* enterotoxin results reported by participants



Sample ST0079 : *Staphylococcus aureus* enterotoxin group reported by method(s)



Sample ST0080: *Staphylococcus aureus* enterotoxin results reported by participants



Sample ST0080: *Staphylococcus aureus* enterotoxin group reported by method(s)

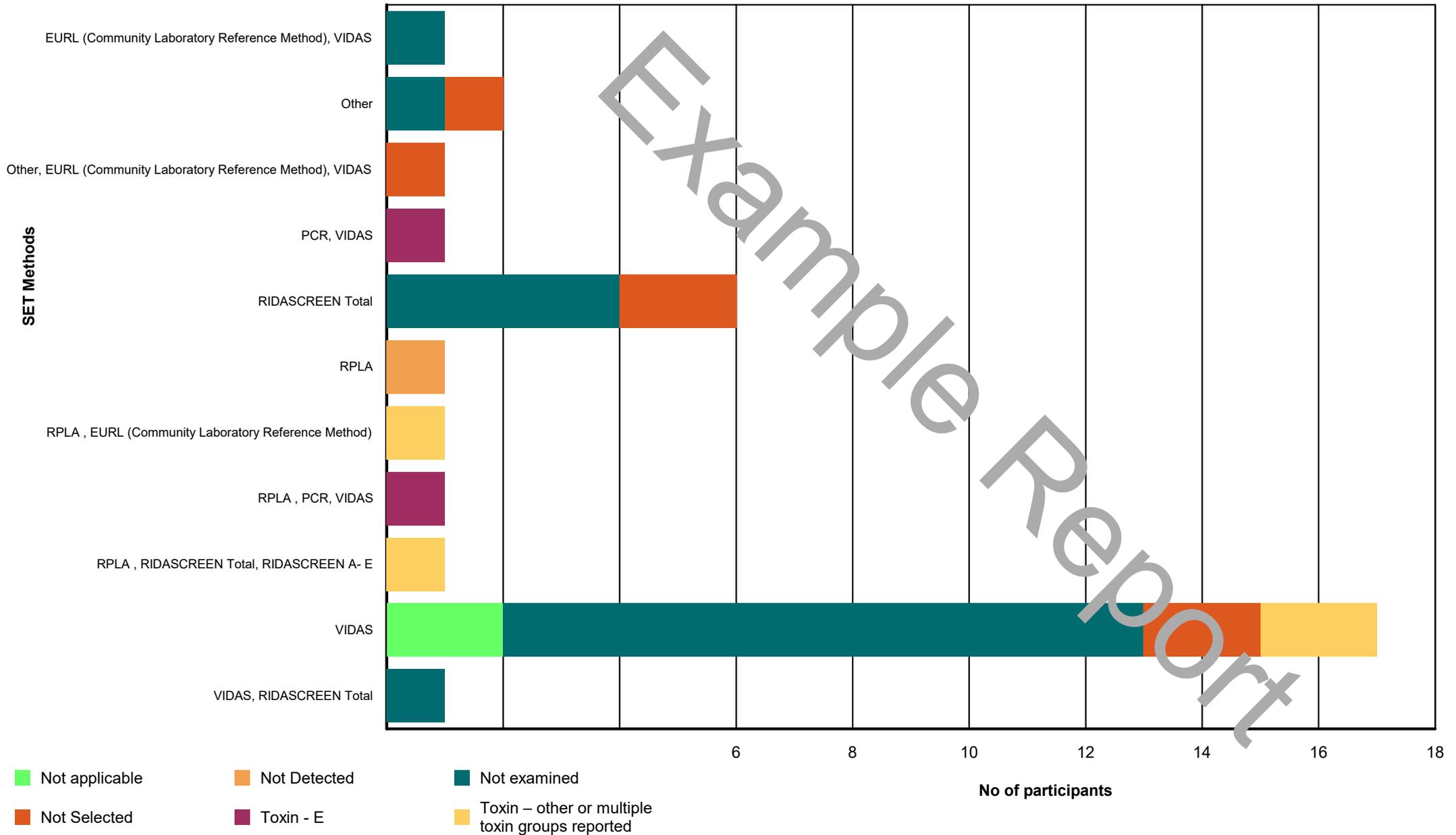


Table 1 - Participants results for samples ST0079 and ST0080

(NE - not examined, NR - not returned)

Lab Number	ST0079	ST0080	Comment
0	Not Examined	Not Examined	ST0079 - Not Examined ST0080 - Not Examined
121	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
153	Not Examined	Not Examined	ST0079 - Not Examined ST0080 - Not Examined
214	Present (Toxin group Not applicable)	Present (Toxin group Not applicable)	ST0079 - Satisfactory ST0080 - Satisfactory
233	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
255	Present	Present	ST0079 - Satisfactory ST0080 - Satisfactory
264	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
291	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
299	Present	Present	ST0079 - Satisfactory ST0080 - Satisfactory
378	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
422	Present (Toxin group D)	Present (Toxin group E)	ST0079 - Satisfactory ST0080 - Satisfactory
451	Present (Toxin group D)	Present (Toxin group A)	ST0079 - Satisfactory ST0080 - Satisfactory

Table 1 (cont'd) - Participants results for samples ST0079 and ST0080

(NE - not examined, NR - not returned)

Lab Number	ST0079	ST0080	Comment
463	Present (Toxin group D)	Present (Toxin group A)	ST0079 - Satisfactory ST0080 - Satisfactory
546	Present (Toxin group A, B, C, D, E)	Present (Toxin group A, B, C, D, E)	ST0079 - Satisfactory ST0080 - Satisfactory
566	Present	Present	ST0079 - Satisfactory ST0080 - Satisfactory
576	Present (Toxin group D)	Present (Toxin group A)	ST0079 - Satisfactory ST0080 - Satisfactory
677	Present (Toxin group Not applicable)	Present (Toxin group Not applicable)	ST0079 - Satisfactory ST0080 - Satisfactory
722	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
861	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
1282	Present (Toxin group D)	Present	ST0079 - Satisfactory ST0080 - Satisfactory
1825	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
1839	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
1861	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
1928	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory

Table 1 (cont'd) - Participants results for samples ST0079 and ST0080

(NE - not examined, NR - not returned)

Lab Number	ST0079	ST0080	Comment
1936	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
1961	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
1987	Present (Toxin group E)	Present (Toxin group E)	ST0079 - Satisfactory ST0080 - Satisfactory
2017	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
2172	Not Examined	Not Examined	ST0079 - Not Examined ST0080 - Not Examined
2275	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
2297	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
2320	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
2396	Present	Present	ST0079 - Satisfactory ST0080 - Satisfactory
2401	Present (Toxin group Not applicable)	Present (Toxin group Not applicable)	ST0079 - Satisfactory ST0080 - Satisfactory
2427	Present (Toxin group Not examined)	Present (Toxin group Not examined)	ST0079 - Satisfactory ST0080 - Satisfactory
2482	Present (Toxin group D)	Absent (Toxin group Not Detected)	ST0079 - Satisfactory ST0080 - Unsatisfactory

Sample specific comment

ST0080 – *Staphylococcus aureus* toxin group E

In the FEPTU laboratory during quality control testing this sample gave a false positive result as toxin A with the Thermo Scientific™ Oxoid™ SET-RPLA Toxin Detection Kit (reversed passive latex agglutination). Those laboratories reporting the presence of toxin A; results have been assessed accordingly.

Comments

Participants are advised that if a toxin test is not carried on the sample or on the *Staphylococcus aureus* grown from the sample to return their results as 'Not examined'. Participants should only use 'Not applicable' if this has been identified as a limitation of the kits assay used.

If you do not return a result for a distribution, you will not be able to view all the participants results data in your individualised report. Therefore, we will post generic reports on the website, which will be available for 12 months after the distribution has closed, so you can access the missing data.

End of report.

Example Report